

of a Crinoid. It is further remarkable by deviating from the quinary type so prevalent in the *Echinodermata*: the lobes and ambulacra of this new genus are each four in number.

We have taken the number and arrangement of the plates surrounding the body as the leading characters on which to found our genera, as we have the variations in their form and other observable peculiarities, together with the number of rays or arms to distinguish the different species. Though the mouth of some of our species is central and but slightly protrusive, and in others it assumes the form of an elongated proboscis, yet we have not at present deemed this difference sufficient to found new genera on, when the plates surrounding the body agree in number, shape and general arrangement; nor have we separated those with the mouths placed laterally, if the other points coincide generally. Had these characters been acted on, we must have divided some long-established genera into no less than three, each differing in this particular. The question is however under consideration as to the propriety of continuing the present arrangement in the cases alluded to.

XIX.—*Descriptions of Chalcidites discovered by C. Darwin, Esq., near Valparaiso.* By FRANCIS WALKER, F.L.S.

*Torymus*, Phormio, Fem. *Viridi-æneus*, antennæ nigræ, pedes rufi, femora viridia, alæ sublimpidæ.

Corpus viridi-æneum, convexum, nitens, scite squameum, parce pubescens: caput transversum, breve, thorace vix latius; vertex sat latus; frons abrupte declivis, excavata: oculi rufi, mediocres, non extantes: antennæ nigræ, subclavatæ, pubescentes, thorace paullo breviores; articuli approximati: thorax longi-ovatus: prothorax transversus, mediocris, antice non angustior: mesothoracis scutum latitudine paullo longius; parapsidum suturæ bene determinatæ, postice approximata; scutellum subovatum: metathorax mediocris, declivis, obconicus: petiolus brevissimus: abdomen longi-ovatum, subcompressum, subtus carinatum, thorace paullo brevius: oviductus exertus, rufus; vaginæ nigræ, abdomine vix breviores: pedes pallide rufi; coxæ virides; femora viridia; ungues et pulvilli fusci; metafemora subtus unidentata, metatibiæ pallide fuscæ, apice spina longa arcuata armatæ: alæ sublimpidæ; squamulæ piceæ; nervi fusci; nervus humeralis ulnari fere duplo longior; radialis ulnari brevior, cubitalis brevissimus; stigma minutum. (Corp. long. lin. 1½; alar. lin. 2¾.)

Callimome Nonacris, Fem. *Viridi-cyaneus*, antennæ nigræ, pedes fusci, femora viridia, alæ sublimpidæ.

Corpus viridi-cyaneum æneo-varium, convexum, scite squameum, parum nitens, parce pubescens: caput transversum, breve, thoracis latitudine; vertex sat latus; frons abrupte declivis: oculi rufi, mediocres, non extantes: antennæ nigræ, validæ, clavatæ, pubescentes, thorace non longiores: thorax longi-ovatus: prothorax sat magis longitudine paullo latius, antice angustior: mesothoracis scutum latitudine paullo longius; parapsidum suturæ bene determinatæ, postice approximata; scutellum subovatum: metathorax

mediocris, declivis, obconicus: petiolus brevissimus: abdomen ovatum, subcompressum, nitens, subtus carinatum, thorace paullo brevius et angustius: oviductus rufus; vaginæ nigræ, abdominis longitudine: pedes fuscii; coxæ virides; femora viridia; tarsi pallide fuscii: alæ sublimpidæ; squamulæ virides; nervi picei; nervus humeralis ulnari longior, radialis ulnari multo brevior, cubitalis brevissimus; stigma minimum. (Corp. long. lin. 1; alar. lin. 1 $\frac{1}{4}$ .)

Callimome Eumelis, Mas. *Viridi-cyaneus, antennæ nigræ, pedes nigro-fuscii, femora viridia, alæ sublimpidæ.*

Corpus sublineare, convexum, viridi-cyaneum, scitissime squameum, parum nitens, parce pubescens: caput transversum, breve, thorace paullo latius; vertex sat latus; frons abrupte declivis: oculi rufi, mediocres, non extantes: antennæ nigræ, crassæ, thorace vix longiores: thorax longi-ovatus: prothorax transversus, brevis: mesothoracis scutum longitudine vix latius; parapsidum suturæ sat bene determinatæ; scutellum subovatum: metathorax obconicus, mediocris, declivis: petiolus brevissimus: abdomen sublineare, supra planum, thorace brevius: pedes simplices, subæquales, virides; trochanteres picei; genua fusca; tibiæ nigræ; tarsi fuscii: alæ sublimpidæ; squamulæ piceæ; nervi fuscii; nervus humeralis ulnari multo longior, radialis ulnari multo brevior, cubitalis brevissimus; stigma minutum. (Corp. long. lin. 3 $\frac{1}{4}$ ; alar. lin. 1 $\frac{1}{4}$ .)

Asaphes vulgaris? Fem. *Æneus, abdomen atrum, antennæ nigræ, pedes fusco-flavi, femora nigro-cincta, alæ limpidae.*

*Asaphes vulgaris*, Ent. Mag.

Corpus convexum, æneum, nitens, fere læve, parce pubescens: caput transversum, breve, thorace paullo latius; vertex latus; frons impressa, abrupte declivis: oculi picei, mediocres, non extantes: antennæ nigræ: thorax longi-obconicus: prothorax transversus, mediocris: mesothoracis scutum longitudine latius; parapsidum suturæ bene determinatæ, postice approximatae fere conniventes; scutellum subconicum: metathorax obconicus, declivis, mediocris: petiolus gracilis: abdomen longi-ovatum, atrum, læve, glabrum, subtus carinatum, apice acuminatum, thoracis longitudine: pedes simplices, subæquales, flavi; coxæ æneæ, femora nigro-cincta; tarsi apice fuscii; mesotibiæ et metatibiæ pallide fusca: alæ limpidae; squamulæ piceæ; nervi fulvi; nervus humeralis ulnari multo longior, radialis ulnari brevior, cubitali longior; stigma minutum. (Corp. long. lin.  $\frac{3}{4}$ ; alar. lin. 1 $\frac{1}{4}$ .)

Lamprotatus Cæcina, Fem. *Cyaneus, antennæ nigræ, pedes flavi, femora fusco-cincta, alæ limpidae.*

Corpus convexum, cyaneum, scitissime squameum, parum nitens, parce pubescens: caput transversum, breve, thoracis latitudine; vertex sat latus; frons impressa, abrupte declivis: oculi mediocres, non extantes: antennæ nigræ: thorax ovatus: prothorax brevis, antice angustior: mesothoracis scutum transversum; parapsidum suturæ sat bene determinatæ; scutellum obconicum: metathorax declivis, mediocris, obconicus: petiolus sat longus: abdomen ovatum, nitens, læve, fere glabrum, supra convexum, subtus carinatum, thorace brevius: pedes simplices, subæquales, flavi; coxæ virides; femora fusco-cincta; tarsi apice fuscii: alæ limpidae; squamulæ piceæ; nervi fuscii; nervus humeralis ulnari multo longior, radialis ulnari brevior, cubitali longior; stigma parvum. (Corp. long. lin. 1; alar. lin. 1 $\frac{1}{4}$ .)

Lyrcus (n. g.) Origo, Fem. *Nigro-cyaneus, antennæ nigræ, pedes fuscii fulvo-cincti, alæ sublimpidae.*

Corpus breve, crassum, convexum, nigro-cyaneum, scitissime squameum, parum nitens, parce pubescens: caput transversum, breve, thoracis latitudine; vertex latus; frons abrupte declivis, vix impressa: oculi rufi, medio-

eres, non extantes: antennæ subclavatæ, graciles, 9-articulatæ? nigræ, thorace paullo longiores; articulus 1<sup>us</sup> longus, gracilis; 2<sup>us</sup> longi-cyathiformis; 3<sup>us</sup> et sequentes breves; clava fusiformis: thorax brevi-ovatus: prothorax transversus, brevissimus; mesothoracis scutum longitudine latius; parapsidum suturæ non bene determinatæ, postice approximata; scutellum obconicum: metathorax longi-obconicus, declivis: petiolus brevissimus: abdomen ovatum, nitens, breve, supra planum, subtus carinatum, apice acuminatum; thorace paullo angustius, vix longius: pedes graciles, simplices, subæquales, fuscii; coxæ nigræ; genua fulva; tibiæ apice basique fulvæ; tarsi fulvi apice fuscii, articulus 1<sup>us</sup> longus, 2<sup>us</sup> multo brevior, 3<sup>us</sup> adhuc brevior, 4<sup>us</sup> 3<sup>o</sup> longior; unguis et pulvilli minuti: alæ sublimpidæ, mediocres; coxæ piceæ; nervi fulvi; nervus humeralis ulnari multo longior, radialis ulnari longior, cubitalis longissimus ulnari vix brevior. (Corp. long. lin.  $\frac{2}{3}$ ; alar. lin. 1 $\frac{1}{4}$ .)

*Pteromalus Gryneus, Fem. Cupreus, antennæ piceæ, pedes flavi, alæ limpidæ.*

Corpus cupreum, convexum, scitissime squameum, parum nitens: caput thorace vix latius, subtus æneo-viride; vertex sat latus; frons abrupte declivis, excavata: oculi picei, mediocres, non extantes: antennæ piceæ, subclavatæ, thorace non longiores: thorax ovatus: prothorax brevissimus, supra vix conspicuus: mesothoracis scutum transversum; parapsidum suturæ vix conspicuæ; scutellum sat magnum, subrotundum: metathorax brevis, declivis, postice angustus: petiolus brevissimus: abdomen ovatum, nitens, læve, fere glabrum, supra planum, subtus carinatum, apice acuminatum, thorace paullo angustius, vix longius: pedes flavi; coxæ virides; tarsi apice fuscii: alæ limpidæ; squamulæ fulvæ; nervi flavi; nervus humeralis ulnari multo longior; radialis cubitali multo longior, ulnari non brevior; stigma minutum. (Corp. long. lin. 1; alar. lin. 1 $\frac{1}{2}$ .)

*Entedon Bedius, Mas. Æneo-viride, abdomen basi viridi-cyaneum, antennæ nigræ, pedes flavi, alæ flavescentes.*

Corpus convexum, læte viride, æneo-varium, nitens, scitissime squameum, parce pubescens: caput transversum, breve, thorace paullo latius; vertex sat latus; frons impressa, abrupte declivis: oculi rufi, mediocres, non extantes: antennæ nigræ, hirtæ, setacæ, thorace non longiores; articulus 1<sup>us</sup> longus, gracilis; 2<sup>us</sup> et sequentes breviores, lineares: thorax ovatus: prothorax brevissimus, supra vix conspicuus: mesothoracis scutum longitudine latius; parapsidum suturæ bene determinatæ, postice approximata; scutellum magnum, subovatum: metathorax magnus, obconicus, declivis: petiolus longus, cylindricus: abdomen brevi-ovatum læve, glabrum, quasi contractum, basi viridi-cyaneum, subtus convexum, thorace brevius; segmentum 1<sup>um</sup> maximum, 2<sup>um</sup> et sequentia brevia: pedes graciles, simplices, subæquales, pallide flavi; coxæ virides; tarsi apice fuscii: alæ flavo-tinctæ, sat latæ; squamulæ fuscæ; nervi fulvi; nervus ulnaris humerali fere duplo longior, radialis humerali brevior, cubitalis brevissimus; stigma minutum. (Corp. long. lin. 1; alar. lin. 2.)

*Entedon Flacilla, Mas. Viride, cyaneo aut cupreo varium, antennæ nigræ, pedes flavi, alæ flavo-limpidæ.*

Corpus convexum, læte viride, nitens, scitissime squameum, parce pubescens: caput transversum, breve, viridi-æneum, thorax paullo latius; vertex sat latus; frons abrupte declivis: oculi rufi, mediocres, non extantes: antennæ nigræ, graciles, subfiliformes, thorace paullo breviores; articulus 1<sup>us</sup> gracilis, sublinearis; 2<sup>us</sup> et sequentes ad 5<sup>um</sup> breviores, subæquales; clava fusiformis, acuminata, articulo 5<sup>o</sup> multo longior: thorax ovatus: prothorax brevissimus, supra vix conspicuus: mesothoracis scutum longitudine latius; parapsidum suturæ bene determinatæ; scutellum viridi-æneum, subovatum:

metathorax magnus, declivis, obconicus: petiolus sat longus: abdomen brevi-ovatum, læve, fere glabrum, subtus convexum, basi viridi-cyaneum, thorace brevius: pedes pallide flavi, graciles, simplices, subæquales; coxæ virides; tarsi apice fuscii: alæ flavo vix tinctæ; squamulæ fuscæ; nervi fulvi; nervus ulnaris humerali multo longior, radialis brevis, cubitalis brevissimus; stigma minutum. (Corp. long. lin.  $\frac{1}{2}$ ; alar. lin. 1.)

*Var. β.*—Antennis articulus 1<sup>us</sup> basi flavus: alæ flavescentes.

*Var. γ.*—Corpus cupreo-varium.

Found also in Valdivia.

Eulophus Rhianus, Fem. *Nigro-æneus, pedes fuscii, alæ sublimpidæ.*

Corpus sublineare, convexum, nigro-æneum, nitens, scite squameum, parce pubescens: caput transversum, breve, thoracis latitudine; vertex sat latus; frons impressa: oculi rufi, mediocres, non extantes: antennæ ademptæ: thorax longi-ovatus: prothorax transversus, mesothorace angustior: mesothoracis scutum longitudine latius; parapsidum suturæ sat bene determinatæ; scutellum magnum, subquadratum, postice latius: metathorax declivis, obconicus, mediocris: petiolus brevissimus: abdomen longi-ovatum, læve, supra planum, subtus carinatum, apice acuminatum, thorace vix longius: pedes simplices, subæquales, fuscii; coxæ nigræ; genua fulva: alæ sublimpidæ, squamulæ picæ; nervi fulvi; nervus ulnaris humerali longior, radialis humerali brevior, cubitali longior; stigma parvum. (Corp. long. lin. 1; alar. lin. 1 $\frac{3}{4}$ .)

#### Genus TETRASTICHUS, Haliday.

A genus formed of *Cirrospilus Lycidas* (Mon. Chal. i. 295.) and other species.

*Tetrastichus Polybæa*, Mas et Fem. *Ater, antennæ nigræ, pedes nigro-fuscii flavo-cincti, alæ limpidæ.*

Corpus sublineare, convexum, atrum, nitens, læve, fere glabrum: caput transversum, brevissimum, thorace paullo latius; vertex latus; frons impressa, abrupte declivis: oculi mediocres, non extantes: antennæ filiformes, pilosæ, nigræ, graciles, thorace longiores: thorax ovatus: prothorax brevissimus, supra non conspicuus: mesothoracis scutum latum; parapsidum suturæ remotæ, bene determinatæ, postice approximata; scutellum obconicum, mediocre, bisulcatum: metathorax declivis, obconicus: petiolus brevissimus: abdomen sublineare, depressum, thorace angustius, non longius: pedes graciles, subæquales, nigræ; tibiæ fuscæ; tarsi flavi, apice fuscii; protibiæ flavæ: alæ limpidæ, latæ, ciliatæ; squamulæ picæ; nervi fuscii; nervus humeralis ulnari multo brevior, radialis nullus, cubitalis sat longus, stigma minimum.

*Fem.* Caput thoracis latitudine; abdomen longi-ovatum, subtus carinatum, apice acuminatum, thorace longius. (Corp. long. lin.  $\frac{1}{2}$ — $\frac{2}{3}$ ; alar. lin.  $\frac{3}{4}$ —1.)

*Tetrastichus Scadius*, Fem. *Viridis, antennæ picæ, pedes flavi, femora viridia, alæ limpidæ.*

Corpus crassum, convexum, obscure viride, subtilissime squameum, parum nitens, parce pubescens: caput transversum, breve, thoracis latitudine; vertex sat latus; frons abrupte declivis: oculi rufi, mediocres, non extantes: antennæ picæ, clavatæ, pubescentes, thorace paullo breviores; clava triarticulata, ovata, acuminata, articulo præcedente latior et plus duplo longior: thorax ovatus: prothorax transversus, mediocris: mesothoracis scutum latum; parapsidum suturæ bene determinatæ; scutellum subconicum, bisulcatum: metathorax brevis, obconicus, declivis: petiolus brevissimus: abdomen longi-ovatum, nitens, supra convexum, subtus carinatum, apice acuminatum, thorace paullo longius et angustius; segmenta transversa, subæqua-

lia : pedes flavi ; coxæ virides ; trochanteres picei ; femora viridia, apice flava ; tarsi apice fusci : alæ limpidæ ; squamulæ piceæ ; nervi fulvi ; nervus ulnaris humerali multo longior, radialis nullus, cubitalis sat longus ; stigma minimum. (Corp. long. lin.  $\frac{3}{4}$  ; alar. lin.  $1\frac{1}{3}$ .)

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XX.—*Short notice of a Botanical Trip to the Highlands of Scotland.* By Professor J. H. BALFOUR, M.D.

THIS trip was made in August last, along with my friend Mr. Babington and several of my pupils. We first visited the Clova district, and collected most of the rare alpine plants which are known to exist in that part of the Grampian range. *Sonchus alpinus* was found in a new locality in Glen Dole. The cliff on which *Astragalus alpinus* used to be found abundantly was examined with care, but only two or three specimens of the plant were seen.

From Clova we proceeded by Glen Callatea to Braemar, and made several botanical excursions in the neighbourhood of Castleton.

In our ascent of Ben Aven, one of the lofty mountains in the Braemar district, we examined a hill called Little Craigin-dal, which deserves notice on account of the number of good alpine plants which it furnished. The hill has a rounded contour, is readily accessible, and is composed of loose dry granitic and micaceous rocks. We were delighted to find upon it *Astragalus alpinus* in great abundance, both in flower and fruit. In some places the turf was actually composed of this plant. *Carex rupestris* was also growing beside it in large quantity. The other plants seen on this hill were, *Thalictrum alpinum*, *Viola palustris*, *Silene acaulis*, *Dryas octopetala*, *Potentilla alpestris*, *Rubus chamæmorus*, *Alchemilla vulgaris*,  $\beta$ . *subsericea*, *Epilobium alpinum* and *alsinefolium*, *Sedum Rhodiola*, *Saxifraga oppositifolia*, *aizoides* and *stellaris*, *Cornus suecica*, *Hieracium alpinum* and *murorum*,  $\beta$ . *pulmonarium*,  $\gamma$ . *Lawsoni*, *Saussurea alpina*, *Gnaphalium supinum*, *Vaccinium uliginosum*, *Arctostaphylos Uva-ursi*, *Azalea procumbens*, *Pyrola media* and *secunda*, *Veronica Chamædrys*, var. *hirsuta*, and *V. serpyllifolia*,  $\beta$ . *humifusa*, *Trientalis europæa*, *Armeria maritima*,  $\beta$ . *alpina*, *Oxyria reniformis*, *Salix herbacea* and *myrsinites*,  $\beta$ . *arbutifolia*, *Betula nana*, *Listera cordata*, *Tofieldia palustris*, *Juncus trifidus* and *triglumis*, *Luzula spicata*, *Carex rigida*, *capillaris* and *pauciflora*, *Aira alpina*, *Lycopodium alpinum*. The hill at first sight appeared to be very unpromising in a botanical point of view, not presenting any of those wet, disintegrating, micaceous cliffs, on which the best alpine plants in Scotland are found ; and I have therefore de-